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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/542,681 04/03/2000 Curtis M. Pleiss M-8379US 4600

7590 06/24/2004

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EXAMINER

LE, KIMLIEN T

ART UNIT PAPER NUMBER

2653

DATE MAILED: 06/24/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/542,681

Applicant(s)

PLEISS ET AL

Examiner

Kimlien T Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 36 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10 and 36 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 22, 2004 has been entered.

Response to Arguments

1. Applicant's arguments filed on March 22, 2004 have been fully considered but they are not deemed to be persuasive.

Applicant asserts on page 4 :

In particular, Applicants respectfully traverse the Examiner's assertion regarding lack of written support for the "a first plurality of sinusoidal marks located at zero crossings of the wobble, each sinusoidal mark being formed from a parallel sinusoidal deviation of both walls of the spiral groove" limitation. For example, consider the very first sentence of the summary on page 3, line 17, which states that high frequency wobble marks "in the wobble of the groove on an optical disk are used to store data," As the Examiner must surely appreciate, any optical disk "groove" will have two walls. A deviation of the groove will thus entail a deviation of these two walls in a parallel fashion.

The Examiner maintains that "a first plurality of sinusoidal marks located at zero crossings of the wobble, each sinusoidal mark being formed from a parallel sinusoidal deviation of both walls of the spiral groove" is not mentioned in the specification, or the figures.

Claim Rejections - 35 USC § 112

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-10 and 36 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the specification, "a first plurality of sinusoidal marks located at zero crossings of the wobble, each sinusoidal mark being formed from a parallel sinusoidal deviation of both walls of the spiral groove (See claim 1)" is not mentioned and therefore is considered new matter.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-10 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Fuji et al. (EP 0 786 767).

Regarding claim 1, see Figs. 15-17 and 20 of Fuji et al. which show a spiral groove in an optical disk comprising: a wobble, the wobble being a sinusoidal deviation

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from the centerline of the groove; and a first plurality of sinusoidal marks located at zero crossings of the wobble; wherein the presence of one of the first plurality of sinusoidal marks at one of the zero crossings represents an active bit and the absence of one of the first plurality of sinusoidal marks at one of the zero crossings represents an inactive bit, a plurality of the active bits and the inactive bits representing an information field (column 21, line 3 – column 22, line 6; Abstract).

Regarding claim 2, see Fig. 20 of Fuji et al which show the examiner interprets the amplitudes to be the same.

Regarding claim 3, see Figs. 15-17 and 20 of Fuji et al. which show the groove of claim 1, wherein the first plurality of sinusoidal marks has a frequency greater than the frequency of the wobble (column 21, line 3 – column 22, line 6; Abstract).

Regarding claim 5, see Figs. 13, 15-17 and 20 of Fuji et al. which show the groove of claim 1, further comprising a second plurality of sinusoidal marks located at zero crossings of the wobble having a different phase than the first mark (See Fig. 13).

Regarding claim 6, see Figs. 15-17 and 20 of Fuji et al. which show the groove of claim 1, further comprising a second plurality of sinusoidal marks located at zero crossings of the wobble having the same phase as the first sinusoidal mark (See Fig. 20).

Regarding claim 7, see Figs. 15-17 and 20 of Fuji et al. which show the groove of claim 6, wherein first plurality of sinusoidal marks and the second plurality of sinusoidal marks are adjacent to each other such that they are aligned in a radial direction (column 21, line 3 – column 22, line 6; Abstract).

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Regarding claim 8, see Figs. 15-17 and 20 of Fuji et al. which show the groove of claim 1, wherein the zero crossings are negative zero crossings (column 21, line3 – column 22, line 6; Abstract).

Regarding claim 9, see Figs. 15-17 and 20 of Fuji et al. which show the groove of claim 1, wherein the zero crossings are positive zero crossings (column 21, line3 – column 22, line 6; Abstract).

Regarding claim 10, see Figs. 15-17 and 20 of Fuji et al. which show the groove of claim 1, further comprising more than one sinusoidal mark in a single cycle of the wobble (column 21, line3 – column 22, line 6; Abstract).

Regarding claim 36, see Figs. 15-17 and 20 of Fuji et al. which show the groove of claim 1, wherein the information field includes at least one of a synchronization mark, a sector information, and an error correction code (column 21, line3 – column 22, line 6; Abstract).

4. Claims 1-3, 5-10 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Asano et al. (EP 0 969 452).

Regarding claim 1, see Figs. 2 and 11 of Asano et al. which shows a spiral groove in an optical disk comprising: a wobble, the wobble being a sinusoidal deviation from the centerline of the groove; and a first plurality of sinusoidal marks located at zero crossings of the wobble; wherein the presence of one of the first plurality of sinusoidal marks at one of the zero crossings represents an active bit and the absence of one of the first plurality of sinusoidal marks at one of the zero crossings represents an inactive bit, a plurality of the active bits and the inactive bits representing an information field (column 5, line 55 – column 6, line 23).

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• Regarding claim 2, see Figs. 2 and 11 of Asano et al. which show the groove of claim 1, wherein the first plurality of sinusoidal marks has the same amplitude as the wobble (column 5, line 55 – column 6, line 23).

Regarding claim 3, see Figs. 2 and 11 of Asano et al. which show the groove of claim 1, wherein the first plurality of sinusoidal marks has a frequency greater than the frequency of the wobble (column 5, line 55 – column 6, line 23).

Regarding claim 5, see Figs. 2 and 11 of Asano et al. which show the groove of claim 1, further comprising a second plurality of sinusoidal marks located at zero crossings of the wobble having a different phase than the first mark (column 21, line 3 – column 22, line 6; Abstract).

Regarding claim 6, see Figs. 2 and 11 of Asano et al. which show the groove of claim 1, further comprising a second plurality of sinusoidal marks located at zero crossings of the wobble having the same phase as the first sinusoidal mark (column 5, line 55 – column 6, line 23).

Regarding claim 7, see Figs. 2 and 11 of Asano et al. which show the groove of claim 6, wherein first plurality of sinusoidal marks and the second plurality of sinusoidal marks are adjacent to each other such that they are aligned in a radial direction (column 5, line 55 – column 6, line 23).

Regarding claim 8, see Figs. 2 and 11 of Asano et al. which show the groove of claim 1, wherein the zero crossings are negative zero crossings (column 5, line 55 – column 6, line 23).

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Regarding claim 9, see Figs. 2 and 11 of Asano et al. which show the groove of claim 1, wherein the zero crossings are positive zero crossings (column 5, line 55 – column 6, line 23).

Regarding claim 10, see Figs. 2 and 11 of Asano et al. which show the groove of claim 1, further comprising more than one sinusoidal mark in a single cycle of the wobble (column 5, line 55 – column 6, line 23).

Regarding claim 36, see Figs. 2 and 11 of Asano et al. which show the groove of claim 1, wherein the information field includes at least one of a synchronization mark, a sector information, and an error correction code (column 5, line 55 – column 6, line 23).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Fuji et al or Asano et al as stated above further in view of Kobayashi et al. (U.S. Patent 5,886,985) or ('522).

The primary references show all the steps of claim 3, except that the first plurality of sinusoidal marks having a frequency 3 to 5 times the frequency of the wobble. However, Kobayashi et al. shows that the first plurality of sinusoidal marks has a frequency greater the frequency of the wobble (column 12, lines 55-60). Therefore, it

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would have been obvious to provide Asano et al. with the first plurality of sinusoidal marks has a frequency greater the frequency of the wobble as taught by Kobayashi et al. The rationale is as follows: One of ordinary skill in the art at the time of the invention would have been motivated to provide Asano et al. with the first plurality of sinusoidal marks has a frequency greater the frequency of the wobble as taught by Kobayashi et al because the clock sync mark to be easily detected without affecting the detection of the wobbling address information

Point of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimlien T Le whose telephone number is 703 305 3498. The examiner can normally be reached on M-F 8a.m-5p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 703 305 6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Kimlien Le

A handwritten signature in black ink, appearing to read 'Tan Dinh', with a long horizontal line extending from the end of the signature.

**TAN DINH
PRIMARY EXAMINER**